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| SERIAL NUMBER | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| EXAMINER | |
|---|---|
| ART UNIT | PAPER NUMBER |
| | 9 |

DATE MAILED: 10/12/00

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 9/11/00 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☒ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-9 are pending in the application.
   Of the above, claims 3-4 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-2, 5-9 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☒ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☒ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

**DETAILED ACTION**

***Election/Restriction***

1. Applicant's election of Group I in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)), despite applicant's statement that the restriction is made with traverse.

***Drawings***

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed. See attached form PTO-948.

3. The drawings are objected to for the following reasons.

-- The figures are improperly cross hatched. All of the parts shown in section, and only those parts, must be cross hatched. The cross hatching patterns should be selected from those shown on page 600-84 of the MPEP based on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02.

-- In figure 8, section B-B' should be section 9-9 to correspond to figure 9. Correspondingly, the specification should be corrected. See also 37 CFR 1.84(h)(3).

Drawing corrections in compliance with MPEP 608.02(v) are required in response to this office action.

***Specification***

4. The abstract is objected to being too long and imprecise.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Extensive mechanical and design details of apparatus should not be given.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Correction of the abstract is required of these and any similar errors in response to this office

action.

5. The specification is objected to for not having legible page numbers.

***Treatment of Claims Based on Language and Format***

6. 35 USC 112, second paragraph, states:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-2 and 5-9 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-- The functional limitations of reducing self inductance or flowing currents or shielding of the claims are confusing, because it is unclear whether they follow from the already recited structure or whether they imply structural limitations not explicitly recited in the claim. That is, examiner is unclear whether applicant intends to only recite intended use, or whether applicant intends to somehow define the structure of the device through these functional recitations. Examiner assumes the former. If the latter is true, examiner is uncertain what structure applicant intends to claim. As such, the scope of the claim becomes indefinite. If applicant is only reciting intended use, upon clarification of the record, this rejection will be withdrawn.

-- Claim 2 does not make sense to the examiner. Examiner cannot determine what is the structure of this claim. Therefore, she assumes that it the same as claim 1.

-- Claim 6, line 2, "being formed on a ground layer" is unclear. Is the claim implying that the conductor is a ground layer?

-- Claim 7, line 2, states that the insulating material contains the adhesive. Nevertheless, what is defined as the insulating layer does not include the adhesive (see for example claim 8). Therefore, this description is confusing. Examiner suggests stating that the insulating layer bears an adhesive layer.

***Treatment of Claims Based on Prior Art***

8. 35 USC 102 includes the following sections which state:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

9. Claims 1-2 and 5-6 are rejected under 35 USC 102(b) as being anticipated by anticipated by by Anderson (US 4441088).

Claims 1 and 5: Figure 1 shows a board with a plurality of leads or wiring sections (12) on insulating material (14) and conductor or shielding film (16) on the leads.

Claim 2 has no structure in addition to claim 1. Therefore, Anderson fully discloses claim 2 as explained with respect to claim 1.

Claim 6: The insulation and conductor form a composite.

10. Claims 5-7 and 9 are rejected under 35 USC 102(b) as being anticipated by anticipated by Elliott et al. (US 4367585, hereafter Elliott).

Claim 5: Figure 1 shows a board with a plurality of leads (14) on insulating material (16)

and conductor (13) on the leads.

Claim 6: The insulation and conductor form a composite.

Claim 7: The board contains adhesive (22) on the side opposite the conductor (13).

Claim 9: The conductor has a thickness of .006 inches which is 152 μm, column 9 at line 29.

11. 35 USC 103(a) states:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Obviousness under 35 USC 103(a) is determined against a background established by the factual inquires set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), which are summarized in items 1-4 below.

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103© and potential 35

USC 102(f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 5 and 7-8 are rejected under 35 USC 103(a) as being unpatentable over Kabadi et al. (US 4798918, hereafter Kabadi).

Kabadi discloses in the cover figure a plurality of leads (42,35,36) on insulating material (54) and conductor (32,41,33) disposed over the leads. Adhesive (53) is contained on the insulating material on the side opposite the conductor. The total thickness of the insulating material and adhesive is 0.004 inches (column 2 at lines 51 and 60: .003" +.001") which is 101μm.

Kabadi discloses the claimed invention except for the thickness of the adhesive and insulating material being between 10 and 100μm. Nevertheless, he discloses that the thickness of the adhesive is approximately .001inches (therefore the total thickness is approximately .004inches, i.e., approximately 101μm). He also discloses that the dimensions of the materials may be varied, column 3 at line 2.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reduce the thickness of the insulating layer and adhesive of Kabadi to less than 100μm to have a more flexible substrate and reduce size, because it is well known in the art to reduce thickness to increase flexibility. Further, Kabadi suggests that alternative dimension to satisfy design choices can be selected. Further still, it has been held that where the general conditions of a claim are disclosed in the prior art, finding the optimum or workable range involves only routine skill. *In re Aller*, 105 USPQ 233,235 (CCPA 1955).

***Related Prior Art***

14. The following references are considered pertinent to the present application. Suzuki et al., Look and Kawakami et al. all disclose insulating material with leads and a conductor formed over the leads.

***Closing***

15. Any inquiries related to the examination of this application should be directed to Ex. K. Cuneo at (703) 308-1233 or her supervisor Ex. J Gaffin at (703) 308-3301. Inquiries of a general nature should be directed to the receptionist of Group 2800 at (703) 308-0956. The fax numbers for Group 2800 are (703) 305-7722 and 7724.

K. Cuneo
Patent Examiner Group 2841
October 10, 2000